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VIOLAMAC MINES
L I M I T E D



1963

annual report

FOR THE YEAR ENDED DECEMBER 31, 1963



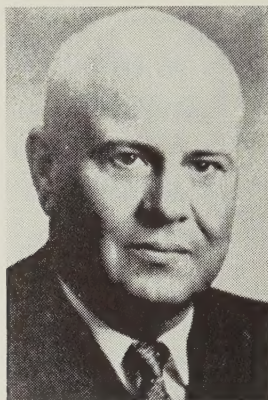
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VIOLAMAC MINES LIMITED

DIRECTORS	A. W. WHITE - - - - - Toronto, Ontario
	E. D. SCOTT - - - - - Toronto, Ontario
	D. F. BURT - - - - - Toronto, Ontario
	B. WILLENBORG - - - - - Miami, Florida
	J. J. WHITE - - - - - Burlington, Ontario
OFFICERS	A. W. WHITE - - - - - President
	E. D. SCOTT - - - - - Vice-President
	H. R. HEARD - - - - - Secretary-Treasurer
	J. GEDDES - - - - - Assistant Secretary
KAM-KOTIA PORCUPINE MINES, LIMITED	
Mine Manager	G. W. WALKEY
Mine Geologist	W. HOGG
Mine Office Address	Box 290, Timmins, Ontario
COBALT REFINERY LIMITED	
Manager	J. N. CRAM
Refinery Office Address	R.R. #1, Cobalt, Ontario
WESTERN OPERATIONS	
Mine Manager	J. C. BLACK
Mine Geologist	S. J. PEDLEY
Mine Office Address	New Denver, British Columbia
TRANSFER AGENTS AND REGISTRAR	Premier Trust Company - - - Toronto, Ontario
	Crown Trust Company, Vancouver, B.C., and Calgary, Alta.
STOCK LISTED	Toronto Stock Exchange
SOLICITORS	Burt, Burt, Wolfe & Bowman - - Toronto, Ontario
AUDITORS	Gunn, Roberts and Co. - - - Toronto, Ontario
HEAD OFFICE	25 Adelaide St. West, Suite 416 - Toronto, Ontario
ANNUAL MEETING	Friday, May 22, 1964, at 2:30 P.M. (Toronto Time), Tudor Room, Royal York Hotel, Toronto, Ontario.

VIOLAMAC MINES LIMITED



ARTHUR W. WHITE

President's Report to the Shareholders

The year 1963 has been a most active one for Violamac Mines Limited. I am pleased to submit, on behalf of the directors, the annual report for 1963 containing consolidated financial statements as at December 31, 1963, together with the auditors' report. Reports from the managers of the Western Operations, Kam-Kotia Porcupine Mines, Limited, and Cobalt Refinery Limited are also included.

EARNINGS

Consolidated net income for 1963 was \$803,767 or 22 cents per share. This was slightly higher than the 1962 net income of \$803,269

Development costs for western operations and loss on operations of Cobalt Refinery offset increased net profit earned by Kam-Kotia Porcupine Mines, Limited during the year.

KAM-KOTIA PORCUPINE MINES, LIMITED

The Kam-Kotia Mine in 1963, its second full year of operation, earned a net profit of \$950,557 compared with \$862,225 in 1962. Concentrates yielding 12,868,499 lbs. of copper were obtained from milling 400,091 dry tons of ore. Full details of this operation are set out in the mine manager's report.

The completion of the 1,035 foot shaft in January of 1964 opens a new and exciting phase in the affairs of the Kam-Kotia Mine. Five levels are being driven to service the "B" and "C" ore zones outlined in surface diamond drilling. Under-ground ore is now being hoisted for mill feed.

Mill expansion was completed in October, 1963 and, although the mill is rated at 1,500 tons, in excess of 1,700 tons per day are being handled.

The starting of the new zinc circuit in November, 1963 adds significantly to the company's revenue and will show to greater effect in 1964 and onwards.

Exploration will be pushed on all of the 5 new levels and will add substantially to ore reserves. Previous surface diamond drilling did not reach below the 4th level and current exploration on the 5th level is definitely intriguing.

Results from Kam-Kotia are highly gratifying and there seems no doubt that future years will establish Kam-Kotia as one of Canada's important copper producers.

COBALT REFINERY LIMITED

Canada's sole custom refinery which can process cobalt-silver-arsenic-nickel ores was acquired by shareholders' approval in June, 1963 and has made good progress.

This refinery, at the date of purchase, processed approximately 50% of the cobalt-silver concentrates produced by the mines in the Cobalt—South Lorraine—Gowganda silver area. Since then all silver producers in the area, save one, are now shipping to the refinery.

During 1963 a loss was incurred by the refinery but with the increase in concentrates being received, a good profit is expected for 1964. The refinery sells its silver bullion under contract to the Royal Canadian Mint and its cobalt and arsenic oxides to industry.

WESTERN OPERATIONS

Silmonac Mines Limited was incorporated during the year under review to develop and operate the properties previously held by the Silmonac Syndicate. Violamac Mines owns 28% of the issued shares of Silmonac Mines Limited.

The property is adjacent to the Carnegie Mining Corporation property (under Violamac control) and the Carnegie mill is ready and available for processing developed ore.

The Carnegie property is also being investigated for an extension of the Silmonac ore zone.

OTHER ACTIVITIES

Several mining prospects were investigated during the year but results were inconclusive and did not warrant immediate action. There has been no change in the status of the company's properties which are all maintained in good standing.

DICKENSON MINES LIMITED

The Violamac holding of 465,009 shares of Dickenson Mines Limited represents a major investment (13%) in that company. Dividends received from this investment in 1963 were \$88,352. At the 1964 indicated rate of 28¢ per share, revenue should rise to \$130,200, a return of 8.8% on the cost of the investment.

DEATH OF MR. C. H. E. STEWART, P.Eng.

It was a great loss, both as a friend and an adviser, when our Vice-President, Mr. C. H. E. Stewart, died in November.

Mr. Stewart's unstinting efforts very largely contributed to bringing the Kam-Kotia mine to production and its undoubted success.

OUTLOOK

The copper and base metal markets generally have enjoyed stability over the past three years. Improving standards of living in the western world continue to make increasing demands, and this condition certainly suggests continuing prosperity for the copper and base metal producers.

APPRECIATION

The Directors express their sincere appreciation to all employees and officers of the company for their capable and loyal efforts during the year.

ARTHUR W. WHITE,
President.

April 24, 1964.

VIOLAMAC MINES LIMITED

Consolidated Statement of Income

For the year ended December 31, 1963

(with comparative figures for 1962)

	1963	1962
OPERATING INCOME — MINING:		
Metal recovery, gross value	\$3,997,508	\$3,718,399
Deduct transportation and treatment costs	994,457	904,505
	<u>\$3,003,051</u>	<u>2,813,894</u>
OPERATING EXPENSES — MINING:		
Development and mining	511,927	538,745
Milling	560,393	533,019
General expenses at the properties	102,606	97,576
Supervision, technical services and mine office expenses	113,309	117,302
Ontario mining tax	55,500	65,000
General and administrative expenses	109,327	83,439
Interest expense	96,867	114,680
	<u>1,549,929</u>	<u>1,549,761</u>
Operating profit — mining, before depreciation and amortization	1,453,122	1,264,133
DEDUCT:		
Depreciation of buildings, machinery and equipment (note 6)	395,244	323,970
Amortization of preproduction expenditures	187,982	150,385
	<u>583,226</u>	<u>474,355</u>
Operating profit — mining	869,896	789,778
INVESTMENT INCOME:		
Dividends from Dickenson Mines Limited	88,352	83,702
Other dividends, interest, and royalties	16,012	12,562
Profit on sale of shares	5,593	2,934
	<u>109,957</u>	<u>99,198</u>
	979,853	888,976
DEDUCT:		
Loss on operation of refinery, including depreciation of \$54,706 (note 1)	118,312	—
Outside exploration expenditures written off	22,128	19,973
Advances to non-consolidated subsidiary and associated companies written off, less amounts recovered	—	33,400
Minority interest in net income of subsidiary company	35,646	32,334
	<u>176,086</u>	<u>85,707</u>
NET INCOME for the year	<u>\$ 803,767</u>	<u>\$ 803,269</u>

Consolidated Statement of Retained Earnings

For the year ended December 31, 1963

(with comparative figures for 1962)

	1963	1962
Balance at beginning of year	\$1,832,949	\$1,029,680
Net income for the year	803,767	803,269
	<u>2,636,716</u>	<u>1,832,949</u>
Deduct additional provision for decline in value of shares in non-consolidated subsidiary and other companies	100,000	—
Balance at end of year	<u>\$2,536,716</u>	<u>\$1,832,949</u>

VIOLAMAC

(Incorporated under the laws of the Province of Ontario)

and its consolidated subsidiaries

Consolidated Balance Sheet

ASSETS

CURRENT ASSETS:

Cash	\$	48,685	
Metal settlements outstanding, concentrates on hand and products in process at net realizable value (note 2)			
Copper		963,566	
Silver and other refinery products		826,292	
Accounts receivable		39,594	\$1,878,137

SHARES IN AND ADVANCES TO OTHER COMPANIES:

465,009 shares Dickenson Mines Limited at cost (quoted market value \$2,557,549)		1,474,633	
Other listed shares at cost (quoted market value \$367,825)		354,155	
Interest in non-consolidated subsidiary companies at cost less amounts written off and allowance for decline in value (note 1)			
Shares		13,089	
Advances		26,933	
Other shares, advances and participations at cost less amounts written off and allowance for decline in value		164,473	2,033,283

FIXED ASSETS:

Buildings, machinery and equipment at cost		4,436,857	
Less accumulated depreciation		1,340,631	
		3,096,226	
Mining claims (note 3)		193,546	
Land at cost		7,955	3,297,727

OTHER ASSETS AND DEFERRED CHARGES:

Supplies at average cost		224,578	
Prepaid expenses and deposits		136,749	
Preproduction and shaft sinking expenditures less amounts written off		589,161	
Interest in and expenditures deferred on outside mining claims		13,572	964,060
			<u>\$8,173,207</u>

AUDITORS' REPORT TO SHAREHOLDERS

We have examined the consolidated balance sheet of Violamac Mines Limited and its consolidated subsidiary companies as at December 31, 1963 and the consolidated statements of income and retained earnings for the year then ended. For Violamac Mines Limited and the subsidiary companies of which we are the auditors, our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances. For one consolidated subsidiary company of which we are not the auditors, we have been furnished with financial statements and the report thereon of its auditors; with respect to the amounts

Toronto, Canada,
February 21, 1964.

MINES LIMITED

(the Province of Ontario)

Subsidiary companies

December 31, 1963

LIABILITIES

CURRENT LIABILITIES:

Bank loan, secured (note 4)	\$2,388,915	
Refinery settlements payable to shippers of concentrates and metallics	533,949	
Other accounts payable and accrued liabilities	525,070	
Ontario mining tax payable	49,515	\$3,497,449

MINORITY INTEREST IN CONSOLIDATED SUBSIDIARY COMPANY		88,382
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SHAREHOLDERS' EQUITY:

Capital stock (note 5)

Authorized — 5,000,000 shares of \$1 each		
Issued — 3,697,900 shares	3,697,900	
Deduct discount less premium	1,647,240	
	2,050,660	
Retained earnings	2,536,716	4,587,376

Approved on behalf of the Board:

A. W. WHITE, Director.

D. F. BURT, Director.

\$8,173,207

THE SHAREHOLDERS

for this subsidiary included in the consolidation, our opinion is based on such statements and report.

In our opinion the accompanying consolidated balance sheet and consolidated statements of income and retained earnings present fairly the financial position of the companies as at December 31, 1963 and the results of their operations for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

GUNN, ROBERTS and CO.,
Chartered Accountants.

VIOLAMAC MINES LIMITED

Notes to Consolidated Financial Statements

1. SUBSIDIARY COMPANIES

All the outstanding shares of Cobalt Refinery Limited were acquired in June, 1963; the consolidated financial statements include the assets and liabilities of this subsidiary company and the results of its operations since acquisition. The other subsidiary companies included in the consolidation are Kam-Kotia Porcupine Mines, Limited and Deebank Limited.

The non-consolidated subsidiary companies have been excluded from the consolidation as they are dormant or are developing their properties and their expenditures since acquisition of control have been deferred to future operations, except for certain write-offs, security profits and custom milling losses carried direct to deficit. The proportion of the net amount so charged to deficit attributable to the shares held by Violamac Mines Limited in such subsidiary companies for their fiscal years ended in 1963 amounts to \$51,256 and for the period since acquisition of the shares amounts to \$261,333 which is substantially less than the amounts written off in respect of the investment in such subsidiary companies.

2. METAL PRICES

In computing the net realizable value of metal settlements outstanding, concentrates on hand and products in process,

- (a) copper has been valued at 30.75¢ per pound less treatment charges of 6.64¢ per pound; and
- (b) refined silver and other products in process have been valued at net selling prices (silver U.S. \$1.293 per ounce), less costs to finish the products in process.

3. MINING CLAIMS

Mining claims are stated at cost which includes shares of the company's capital stock valued at \$40,000.

4. MINE DEVELOPMENT, KAM-KOTIA PROPERTY

Expenditures to be incurred subsequent to December 31, 1963 for mine development and for equipment required to bring the underground mine into production are estimated to be approximately \$600,000. For this purpose it is anticipated that the bank loan will be increased by \$200,000 and that the balance of the funds required will be provided out of earnings.

5. CAPITAL STOCK

During 1963, 38,045 shares were issued for \$57,536 in accordance with stock options exercised by employees. At December 31, 1963 employees held options on 11,600 shares at \$1.35 per share expiring on July 31, 1965 and on 15,500 shares at \$2.00 per share expiring on August 31, 1966.

6. DEPRECIATION

Kam-Kotia Property

As underground mining has not yet commenced, no depreciation has been provided in respect of buildings and equipment acquired for that purpose. Depreciation has been provided on the straight line method, at the rate of 30% per annum for pit and automotive equipment, and at the rate of 15% per annum for other buildings, machinery and equipment.

Refinery

Depreciation of refinery buildings, machinery and equipment has been provided on the straight line method at the rate of 10% per annum.

7. INCOME TAXES

No provision for income taxes is required on income from the Kam-Kotia Mine as such income is exempt from income taxes until April 30, 1964.

VIOLAMAC MINES LIMITED

Consolidated Statement of Source and Application of Funds

For the year ended December 31, 1963

SOURCE OF FUNDS:

Net income for the year, before minority interest	\$	839,413	
Depreciation and amortization not requiring cash outlay (including refinery \$54,706)		637,932	
		<u>1,477,345</u>	
Proceeds from issue of capital stock		57,536	
Decrease in interest in and expenditures deferred on outside mining claims		18,281	\$1,553,162
		<u></u>	

APPLICATION OF FUNDS:

Additions to buildings, machinery and equipment, less disposals	1,175,222	
Increase in shaft sinking expenditures deferred	354,521	
Investment in shares of Cobalt Refinery Limited, a wholly owned subsidiary company, and advances prior to acquisition of shares	50,000	
Investment in shares of and advances to other companies (net)	255,559	
Increase in supplies	92,927	
Increase in prepaid expenses and deposits	20,095	1,948,324
	<u></u>	<u></u>

DECREASE IN WORKING CAPITAL POSITION		\$ 395,162
		<u></u>

Working capital position:

Deficiency at January 1, 1963	\$	590,099
Add working capital deficiency of subsidiary company at date of acquisition in 1963		634,051
		<u>1,224,150</u>
Add decrease in working capital position during the year		395,162
		<u>\$1,619,312</u>

VIOLAMAC MINES LIMITED

and its consolidated subsidiary companies

Interest in Non-Consolidated Subsidiary Companies

December 31, 1963

Shares:

1,040,000	Camarillo Oils Ltd. (including 300,000 shares in escrow)
1,601,840	Carnegie Mining Corporation Ltd.
1,141,322	Glencair Mining Co. Ltd. (including 420,000 shares in escrow)
680,710	Lithia Mines & Chemicals Ltd. (including 337,500 shares in escrow)
1,180,000	Lone Bachelor Mines Ltd. (including 675,000 shares in escrow)

Other Shares, Advances and Participations

December 31, 1963

Shares:

736,350	Abino Gold Mines Ltd. (including 5,000 shares in escrow)
178,000	Centre Hill Mines Ltd. (including 40,000 shares in escrow)
355,000	Gateway Uranium Mines Ltd. (including 202,298 shares in escrow)
604,000	Inore Gold Mines Ltd.
171,150	Uranium Ridge Mines Ltd. (including 161,615 shares in escrow)
112,500	Northwest Canalask Nickel Mines Ltd. (in escrow)

Kam-Kotia Porcupine Mines, Limited

Mine Manager's Report

The President and Directors,
Kam-Kotia Porcupine Mines, Limited.

Gentlemen:

Our report covering operations at the property for the year ending December 31st, 1963 is submitted hereunder.

Production and Milling

Milling was carried out continuously throughout the year except for a planned shutdown of 5 days in October to revise the grinding circuit to effect an increase of about 50% in milling capacity. Revisions to the balance of the mill plus installations of additional equipment including a zinc circuit were made with only minor down time during the year. Mill operating time was 93.93% of total available time.

PRODUCTION DATA

Dry Tons Milled	400,091
Average Tonnage per Calendar Day	1,096.1
Average Tonnage per net Operating Day	1,167.0
Average Mill Head Grades ..	2.00% Cu + 0.86% Zn
Copper Concentrate Produced — Dry Tons	34,035.3
Average Grade of Concentrates (Cu)	19.90
Pounds Returnable Copper Produced	12,868,499
Average Copper Recovery in Milling	84.7%
Smelter Settlements Outstanding as at Dec. 31st, 1963 — (Pounds Returnable Copper)	3,976,471.5

Mill heads ranged between 1.5% and 2.5% Cu with minor tonnages of lower and higher grade material being treated. Recoveries ranged between 76% and 92.4%.

A small tonnage of zinc concentrates was produced in November and purchased by British Metal Corporation under contract. This shipment amounted to 44.5 tons grading 51.6% zinc.

A total of 8,509.7 ounces of silver were also produced and paid for in the copper concentrates.

MILLING DATA

Grinding Steel Consumption (Balls and Rods) — 3.50 lbs./tons milled.

REAGENT CONSUMPTION

	lbs./tons milled
Soda Ash	0.41
Hydrated Lime	3.89
Amyl Xanthate	0.58
Sodium Cyanide	0.027
Dow Froth	0.023
Zinc Sulphate	0.013

Mining Operations

All mill feed was supplied from the "A" Zone ore bodies by open pitting with the open pit operating on a one shift per day, 6 day basis, at maximum capacity. Low grade material mined was stockpiled for future milling to allow for the highest possible heads to be milled.

Pit production figures are summarized below:—

	1963 Tons	To Date Tons
Total Tons Broken	865,235	2,486,880
Tons Milled	400,091	1,018,223
Milling Ore on Crusher Stockpile	49,715 at 1.65% Cu	
Low Grade Copper Stockpiles (1)	78,210 at 0.76% Cu	246,407 at 0.755% Cu
(2) *	12,930 at 1.15% Cu	28,635 at 1.21 % Cu
Zinc Ore Stockpiled	5,630 at 3.10% Zn	17,700 at 3.11 % Zn
Waste Rock Broken and Stockpiled	368,487	1,158,671
Total Tonnage Hauled	859,835	2,542,111
Total Blast Hole Footage Drilled	181,095	525,115

NOTE — * 12,930 tons were removed and milled from this stockpile.

The overall ratio of non-milling rock to milling ore from start of operations is 1.51 to 1.00. During 1963, this ratio was 1.13 to 1.00.

Mining of benches 4 and 5 were completed and #6 bench was partially mined. No. 6 and 7 benches and fringe areas will be mined in 1964. Only a nominal tonnage of waste rock will be mined in 1964.

All pit equipment performed well and availability of production machines averaged over 90%.

Exploration

Surface diamond drilling was continued on the "C" Zone to provide detail for mining down to the 3rd planned level, until late March, 1963. Seventeen holes for a total footage of 9,513 feet were drilled and this drilling indicated a tonnage in excess of 400,000 tons of ore grading higher than 2.0% Copper and about 2.0% Zinc with minor amounts of silver and gold. This zone is open at both ends and at depth, and exploration will be continued from underground openings in 1964. An additional 17 holes, totalling 2,054 feet were drilled at the East and West ends of the pit zones to define fringe areas. This drilling added minor tonnages to reserves at the East end of the pit, and in conjunction with closely spaced percussion drilled holes indicated about 250,000 tons of low grade ore South and West of the pit which can be mined by open pitting.

Several prospects in the area were examined and further work on the most promising is planned for 1964.

A major program of exploration to be conducted from No. 1 Shaft openings is planned for 1964 with the 5th level (800 feet below surface) to be the major base for exploration. The areas adjacent to indicated ore bodies will be the primary target.

Ore Reserves

Ore reserves as at January 1st, 1964, adjusted for tonnage mined and additional information gained during the year are shown hereunder:—

COPPER ORE	Tons	Average Copper Content
(a) Open Pit Ore + High Grade Stockpile	125,168	1.557%
(b) "B" Zone	1,170,528	2.174%
(c) "C" Zone	406,495	1.986%
(d) M-60 Zone	146,584	1.197%
(e) North Zone	90,983	1.548%
(f) Low Grade Sulphide Ore	250,792	0.772%
(g) Low Grade Greenstone Ore	269,200	0.808%
Total	<u>2,459,750</u>	<u>1.733%</u>

NOTES —

Low Grade Sulphide Ore (f) — This material has been mined and is stockpiled. A small tonnage may be milled in 1964.

Low Grade Greenstone Ore (g) — This material will be mined in 1964 and partially milled in 1964, supplementing underground production until the mine can supply total mill feed.

Despite the milling of 400,091 tons grading 2.00% Cu in 1963, ore reserves were slightly increased during the year. A dilution factor of 5% has been used in computing tonnage and grades.

ZINC ORE	Tons	Average Zinc Content
(a) Zinc Ore Stockpiled	17,700	3.11 %
(b) Tonnage in "A" Zone (outside open pit limits)	387,275	4.283%
(c) "B" Zone (included in Copper Tonnage)	286,199	2.88 %
(d) "C" Zone (included in Copper Tonnage)	406,495	1.710%
Total	<u>1,097,669</u>	<u>2.944%</u>

Of this total the "B" & "C" zones are included in copper ore reserve tonnage at copper grades shown.

The "A" Zone Zinc Tonnage contains some copper, but, an average copper grade cannot be set due to insufficient data. Available copper assays from drill cores in this zone suggest a copper grade of from 0.50 to 0.70% Cu.

Operating Costs

	Per Dry Ton Milled — 1963	
Smelting, Refining, Assaying and Representation	\$ 2.076	
Trucking and Rail Freight410	\$ 2.486
	<hr/>	
Mining	1.203	
Milling	1.401	
Administration and General Expense632	3.236
	<hr/>	
Total		<u>\$ 5.722</u>

Above costs do not include bank or debenture interest or provincial mining taxes.

Mining costs shown include the cost of mining, hauling and stockpiling the following tonnages, additional to the tonnage mined for milling:—

Ore Stockpiled	105,264
Waste Rock	368,487
	<hr/>
Total Tonnage	<u>473,751</u>

Plant Expansion and Underground Development

PLANT EXPANSION

This involved (a) increasing the mill capacity from 1,000 tons/day to 1,500 tons/day and installation of a zinc circuit, (b) installation of mining plant and auxiliary equipment to handle the mining of about 50,000 tons monthly.

The mill project has been completed and the mill operated at higher capacity since October 22nd, 1963. Actual capacity will run from 1,600 to 1,800 tons per day. The zinc plant was operated in November and produced marketable zinc concentrates. Some circuit revisions were necessary and these were completed in December, 1963.

It is proposed to install some additional mill control equipment early in 1964 and enlarge one of the crushing plant conveyors.

MINING PLANT

The installation of mining plant was basically completed by the end of 1963, with only details to complete in 1964. This involved (1) erection of a 50' x 120' hoistroom and installation of a 10 ft. 1000 H.P. hoist, (2) erection of 135 ft. steel headframe and shaft house plus 2,000 ton ore bin and 700 ton waste bin plus the necessary service facilities.

SURFACE PLANT

The following additional facilities and equipment were installed to service the enlarged operation.

- (1) MAIN OFFICE — A 24' x 48' addition was erected.
- (2) MINE DRY — Facilities were doubled.
- (3) CARPENTER SHOP AND SURFACE DRY — A 30' x 96' steel building was erected and equipped.
- (4) POWERHOUSE — An additional 75 H.P. low pressure boiler was installed plus a 250 H.P. high pressure compressor. A 500 H.P. high pressure compressor was installed in January, 1964 and the building has been enlarged to provide space for this unit.

- (5) WATER SUPPLY — Capacity of pumping system was increased from 650 G.P.M. to 950 G.P.M.
 - (6) POWER — The existing 550 volt distribution center was enlarged and a 3,000 K.V.A., 27000 volt to 2300 volt substation erected to provide power for 500 H.P. rod mill and mine plant.
 - (7) MINE AIR HEATING PLANT — A 2½ million B.T.U. heater was purchased to heat mine ventilating air, and will be installed early in 1964.
 - (8) TAILINGS DISPOSAL — The tailing line was raised 8 ft. and extended about 400 ft.
- Only minor additions to Surface Plant are scheduled for 1964.

Underground Mine Development

No. 1 shaft was sunk to a depth of 863.5 feet below the collar at December 31, 1963, and 5 levels established at 150 feet, 300 feet, 450 feet, 650 feet and 800 feet below the collar. About 172.5 feet have since been sunk and the loading and spill pockets excavated. Lateral development started on all levels about the beginning of February.

Shaft sinking operations were hampered by severe weather early in 1963, and from the 200 ft. horizon to about the 850 ft. horizon minor water flows were cut which slowed down shaft advance. It was necessary in sinking from about 550 feet to 850 feet to sink through a curtain of grout. No problems from water are expected in either development or mining.

Development on all five levels will proceed simultaneously with driving of ore and waste passes and stope development will be pushed on the first four levels on the "B" Zone, to be followed by stope development of the "C" Zone.

The 5th level will be driven as an exploration base and exploration drilling will follow the heading advance. Shaft deepening is tentatively planned for early 1965. Sub level stoping using ring drilling and benching will be used in the main sections of the "B" and "C" Zones with shrinkage stoping used to mine fringe areas and small ore shoots. The mine is expected to produce 30,000 tons monthly by May or June and 50,000 tons monthly by the end of 1964. All ore and waste will be hoisted in 80 cu. ft. side dump skips from a loading pocket.

Development and exploration expense will be heavy in 1964 with about \$850,000 budgeted for these items.

Capital Expenditures

Expenditures for buildings and equipment and No. 1 shaft sinking totalled \$1,496,000 during 1963. The major items were as follows:—

(1) Mill Expansion	\$ 340,500
(2) Headframe, Bins, Shafthouse, Hoistroom and Hoist	390,000
(3) Mine Production Equipment	215,000
(4) H.P. Compressor Plant	40,000
(5) 27000 volt to 2300 volt Substation and Distribution	25,000
(6) Carpenter Shop and Surface Dry	14,000
(7) Additions to Mine Dry	16,500
(8) No. 1 Shaft Sinking	401,000
Total	<u>\$1,442,000</u>

The balance of \$54,000 was spent on minor equipment additions, and building alterations not listed above.

Capital expenditures budget for 1964 is \$260,000 for mine equipment, and some mill control equipment.

Personnel Relations and Labour Force

Total force employed as at December 31st, 1963 was:—

Staff	27
Crew	112
Total	<u>139</u>

Of this force, about 45 men are engaged on construction and development. Maximum force during the year was 145 men. In 1964, total crew will rise to a maximum of 250 men. There appears to be no shortage of experienced miners or other personnel. The Company's Welfare Plan continued unchanged for hourly rated men. Effective July 1st, a pension plan was put into effect for Company staff employees with all eligible personnel participating.

A contract was signed with The General Workers Union C.L.C. who represent all hourly rated employees on March 28th. The agreement is for 30 months, and expires September 28, 1965. The contract provided for a reduction in the work week to 44 hours by December 28, 1963 with maintenance of take home pay and across the board increases of 2 cents per hour on June 28, 1964 and December 28, 1964.

Company-Employee relations continue to be excellent, and one discharge case was taken to arbitration and settled in the Company's favour.

Turnover amongst crew was minor and there were no serious or crippling accidents suffered by Company Employees.

Staff requirements will increase in 1964 and there is a large number of qualified applicants for these jobs.

ACKNOWLEDGEMENT

I would like to record my appreciation to the Staff and Crew for the efficient way in which they carried out their duties.

The consideration and support given by the Officers and Directors of the Company is gratefully acknowledged.

Respectfully submitted,

G. W. WALKEY,
Mine Manager.

February 20, 1964.

Kam-Kotia Porcupine Mines, Limited

Statement of Income

For the year ended December 31, 1963

(with comparative figures for 1962)

	1963	1962
OPERATING INCOME:		
Metal recovery, gross value	\$3,997,508	\$3,697,587
Deduct transportation and treatment costs	994,457	900,942
	<u>\$3,003,051</u>	<u>2,796,645</u>
OPERATING EXPENSES:		
Development and mining	511,927	530,967
Milling	560,393	529,449
General expenses at the property	94,407	90,396
Supervision, technical services and mine office expenses	112,211	98,502
Ontario mining tax	55,500	65,000
Administrative expenses	47,416	26,293
Interest expense	87,310	123,653
	<u>1,469,164</u>	<u>1,464,260</u>
Operating income before depreciation and amortization ..	<u>1,533,887</u>	<u>1,332,385</u>
Other deductions:		
Depreciation	395,349	319,775
Amortization of preproduction expenditures	187,981	150,385
	<u>583,330</u>	<u>470,160</u>
Net income for the year	<u>\$ 950,557</u>	<u>\$ 862,225</u>

Cobalt Refinery Limited

The President and Directors,
COBALT REFINERY LIMITED.

The following is my report on the operations of Cobalt Refinery Limited for the Calendar Year 1963.

Although operations were not continuous throughout the year, there has been a marked improvement since the plant was acquired by Cobalt Refinery Limited in 1962. Cobalt Refinery Limited became a wholly-owned subsidiary of Violamac Mines in June, 1963.

Mines shipping to Cobalt Refinery Limited in 1963 included Langis Silver & Cobalt Mining Co. Ltd., Glen Lake Silver Mines Ltd., Keeley Frontier Mines Ltd., Rix Athabasca Mines Ltd., Silver Summit Mines Ltd., Silver-Miller Mines Ltd., Patricia Silver Mines Ltd., and Silvermaque Mines Limited. We are pleased to announce that by the end of January, 1964 all silver mines in the area except one have agreed to ship their concentrates to our plant.

Average employment for 1963 was 51 men.

FINANCIAL

The plant operated for the Calendar Year of 1963 with an operating loss before interest charges and allowance for depreciation.

DURING 1963

Concentrates received and treated	1,405 tons
Smelter and Roaster ran	216 days
Cobalt plant ran	33 weeks
Arsenic Refinery ran	38 days
	Value
Silver produced	2,005,854 oz. \$2,744,998
Cobalt produced as oxide and sold	68,482 lbs. \$ 26,034
Nickel produced as oxide and sold	30,000 lbs. \$ 18,900
Arsenic produced and sold as oxide	175,000 lbs. \$ 7,632
By-products	
Gold-Bismuth-Lead-Copper, etc.	\$ 4,250

The outlook for the future is much improved. We should process approximately 175 tons of feed per month which in 1964 should produce over 4,000,000 oz. finished silver, 125 tons of cobalt oxide, 30 tons of nickel oxide, 250 tons of arsenic trioxide. Operation at this volume should earn a profit. The company has a 5-year contract to supply up to 6,000,000 oz. of fine silver per year to the Royal Canadian Mint.

Conditions in the Cobalt-Gowganda area are encouraging and with the increased demand for silver, a reasonable financial future can be expected. Cobalt Refinery Limited will play an important role in providing stability to this famous Silver Camp.

Respectfully submitted,

J. N. CRAM, P.Eng.,
Vice-President and General Manager.

Cobalt Refinery Limited

Statement of Operations

For the eight months ended December 31st, 1963

SALES of Metals and Products		\$2,131,656
 COST OF SALES:		
Inventory of Metals and Products April 30th, 1963	\$ 679,308	
Purchases of Concentrates and Metallics	1,951,653	
Direct Costs of Processing and Refining	195,238	
	<u>\$2,826,199</u>	
<i>Less:</i> Inventory of Metals and Products, December 31st, 1963	696,025	2,130,174
GROSS MARGIN		<u>\$ 1,482</u>
Selling, General and Administrative Expenses	\$ 68,534	
Interest Expense (net)	12,439	80,973
	<u></u>	<u>79,491</u>
OPERATING LOSS before providing for Depreciation		79,491
Provision for Depreciation		51,403
NET LOSS for the eight months		<u><u>\$ 130,894</u></u>

VIOLAMAC MINES LIMITED

NEW DENVER, B.C.

The President and Directors,
Violamac Mines Ltd.,
Toronto, Ont.

Gentlemen:

A summary of activities conducted by your company in the Slocan area of British Columbia for the year ending December 31, 1963 follows hereunder:

VICTOR MINE

Underground operations were conducted exclusively by two groups of Lessees resulting in the production of 1,091 wet tons of ores having a net smelter return of \$46,165.00.

SILMONAC SYNDICATE

As of December 1st, 1963 Silmonac Mines Limited was formed and succeeded the Syndicate as the operating unit. Underground exploration was continued throughout the year on the 63 claims previously owned by Kelowna Mines Hedley Ltd. The Syndicate members maintained their interest in the new company.

Exploration

Drifts and Cross-cuts	3,022 ft.
Raises	127 ft.
Diamond Drilling	3,708 ft.

Two exploratory drives were put out. The 3996 North Drive was put out to intersect the Hope Lode in its assumed position west of a tangential fault. No evidence of a major lode was indicated in the drive or in subsequent drilling from it.

The 3996 West Drive commencing in the foot wall of a drill-indicated lode intersected the lode 1,000 ft. from its starting point. Subsequent exploration along the lode for 800 ft. encountered small veins carrying values in silver, lead and zinc. The size and discontinuity of the mineralized veins so far encountered will not allow mining in this section. Exploration of this mineralized lode section is continuing, with drilling both above and below the drive horizon scheduled for early in the New Year. The complexity of the structure and extreme lode widths are at present causing considerable concern.

OUTSIDE CLAIMS

Mineral leases and claims in the McGuigan Basin were allowed to revert to the Crown. A claim group was located in the Sandon area in which your company holds one half interest.

Appreciation for the guidance and support given by the President and Directors, also for the co-operation of the staff and employees is gratefully acknowledged.

Respectfully submitted,

J. C. BLACK,
Western Manager.

February 24, 1964.

